



1309.43669X00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Applicants: Hiroshi SUZUKI et al.

Serial No.: 10/802,913

Filed: March 18, 2004

For: STORAGE SYSTEM

Group: 2836

Examiner: A. Amrany

**INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §1.97 & 1.98**

MS Amendment

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

February 9, 2007

Sir:

In the matter of the above-identified application, Applicants are submitting herewith a copy of the documents listed in the attached form equivalent to Form PTO-1449 for the Examiner's consideration. Copies of the U.S. documents are not being enclosed.

This information disclosure statement is being submitted before the mailing date of either a final action or a notice of allowance and is accompanied by the fee of \$180.00 set forth in 37 CFR §1.17(p).

To the extent the documents listed on the attached form equivalent to Form PTO-1449 are not in the English language, the requirement of 37 CFR §1.98(a)(3) for a concise explanation of the relevance is satisfied by an English language translation of the documents.

02/12/2007 MAHMED1 06000018 10802913

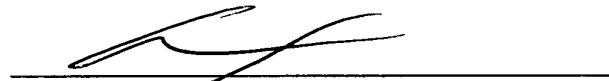
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188.00 OP

It is respectfully requested that this information disclosure statement be considered by the Examiner.

Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (1309.43669X00) please credit any excess fees to such deposit account.

Respectfully submitted,



Carl I. Brundidge
Registration No. 29,621
MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.

CIB/jdc
(703) 684-1120

**FORM PTO-1449 U.S. Department of
Commerce Patent and Trademark Office**
**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use several sheets if necessary)

ATTY. DOCKET NO.

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SERIAL NO.

10/802,913

APPLICANT
Hiroshi SUZUKI et al.FILING DATE
March 18, 2004GROUP
2836
U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER							DATE	NAME	CLASS	SUBCLASS	FILING DA IF APPROPR
		6	6	3	6	9	3	4					
		5	9	5	1	6	9	1	09/99	Ng et al			
		6	1	1	5	7	9	7	09/00	Kanda et al			
		6	1	7	3	3	6	0	1/01	Beardsley et al			
		6	5	5	3	4	0	8	4/03	Merrell et al			
		6	6	0	6	6	9	0	8/03	Padovano			
		6	7	7	2	3	6	5	8/04	Obara			
	2 0 0 4	0	1	6	2	9	4	0	8/04	Yagisawa et al			
	2 0 0 3	0	2	2	1	0	6	1	11/03	EI-Batal			

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER							DATE	COUNTRY	CLASS	SUBCLASS	ABSTRACT
		0	8	4	4	5	6	1					
		0	8	4	4	5	6	1	5/98	European			YES

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation is considered, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(Form PTO-1449 [6-4])

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	6 1 0 8 7 4 8	08/00	Ofek et al			
	6 5 1 0 4 9 1	1/03	Franklin et al			
	6 6 5 1 1 3 7	11/03	Baek et al			
	6 7 0 8 2 3 2	03/04	Obara et al			
	5 5 4 6 5 5 8	8/96	Jacobson et al			

FOREIGN PATENT DOCUMENTS

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1 3 1 5 0 7 4	5/03	European			YES

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	2 0 0 4	0	1	9	3	7	6	0	9/04	Matsunami et al				
	2 0 0 4	0	1	9	9	5	1	5	10/04	Penny et al				
	2 0 0 2	0	1	3	8	7	0	5	9/02	Suzuki et al				
	2 0 0 3	0	2	2	1	0	7	7	11/03	Ohno et al				
	2 0 0 4	0	0	1	0	6	6	2	1/04	Aruga				
		7	0	8	0	2	0	1	7/06	Suzuki, et al				

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	2 0 0 4	0	1	2	8	6	2	7	7/04	Zayas				
	2 0 0 3	0	0	9	7	6	0	7	5/03	Bessire				
	2 0 0 4	0	0	1	0	6	6	0	1/04	Konshak et al				
	2 0 0 4	0	0	7	8	7	0	7	4/04	Apperley et al				
	2 0 0 4	0	0	7	3	7	4	7	4/04	Lu				
	2 0 0 4	0	1	7	7	2	1	8	9/04	Meehan et al				

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		5	6	0	3	0	0	3	2/97	Akizawa et al			
		5	8	6	7	7	3	6	2/99	Jantz			
		5	8	8	4	0	9	8	3/99	Mason, Jr.			
		6	2	1	9	7	5	2	4/01	Sekido			
		6	2	2	3	2	4	9	4/01	Kato et al			
		6	5	4	9	9	7	8	5/03	Mansur et al			
		6	6	4	0	2	7	8	10/03	Nolan et al			
		6	6	8	4	2	9	5	1/04	Fujimoto et al			
		6	7	4	5	2	8	7	6/04	Fujimoto et al			
		6	2	0	1	6	9	2	3/01	Gamble et al			

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		2	3	3	3	9	5	4					YES
		0	3	3	3	9	5	4	11/02	Japan			
		0	1	7	8	5	5	7	6/04	Japan			

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		6	6	2	8	5	1	3	9/03	Gallagher et al			
		6	8	3	1	8	3	9	12/04	Bovell			
		6	0	6	1	7	5	0	5/00	Beardsley et al			
		6	7	6	3	4	3	6	7/04	Gabber et al			
		6	7	9	2	4	8	6	9/04	Hanan et al			
		6	1	3	7	6	7	9	10/00	Chang			
		6	3	5	1	3	7	5	2/02	Hsieh et al			
		6	4	8	4	2	3	6	11/02	Fujimoto et al			
		6	4	8	4	2	6	9	11/02	Kopylovitz			
		6	7	2	8	9	2	2	4/04	Sundaram et al			
		5	4	7	5	8	1	4	12/95	Tomimitsu			

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER							DATE	COUNTRY	CLASS	SUBCLASS	ABSTRACT
		2	1	8	8	8	3	5	7/90	Japan			YES

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	IBM Technical Disclosure Bulletin vol. 38, No. 7, July 1995 (New York), "Foreground/Background Checking of Parity in a Redundant Array of Independent Disks-5 Storage Subsystem", pp. 455-458.
	Laboratory Automation and Information Management 32, 1996, (Elsevier Science B.V.), R E Dessey, "Computer Connections", pp. 53-62.

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		6	5	0	2	1	0	8						
		6	6	5	8	5	9	2	12/02	Day, III, et al				
		2	0	0	0	7	4	6	12/03	Cohen et al				
		0	0	0	0	0	0	0	1/02	Taketa et al				
		2	0	0	4	0	4	1	3	4/02	Okada et al			
		0	0	0	4	0	4	1	3	4/02	Idleman et al			
		2	0	0	0	0	0	0	11/00	Latif, et al				
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FOREIGN PATENT DOCUMENTS

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		2	0	0	1	4	2	6	5/01	Japan				
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	2 0 0 3	0	0	9	7	5	0	4	5/03	Oeda et al				
	2 0 0 3	0	1	1	5	4	3	7	6/03	Tomita				
	2 0 0 3	0	1	4	5	1	6	7	7/03	Tomita				
	2 0 0 3	0	1	9	6	0	0	2	10/03	Nakayama et al				
	2 0 0 3	0	1	9	6	1	4	7	10/03	Hirata et al				
	2 0 0 3	0	2	0	4	6	7	1	10/03	Matsunami et al				

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	2 0 0 4	0	0	2	4	9	3	0	2/04	Nakayama et al				
	2 0 0 4	0	0	6	8	6	1	0	4/04	Umberger et al				
	2 0 0 4	0	1	0	7	3	2	5	6/04	Mori				

FOREIGN PATENT DOCUMENTS

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EXAMINER INITIAL		DOCUMENT NUMBER								DATE	NAME	CLASS	SUBCLASS	FILING DA IF APPROP
	2 0 0 1	0	0	4	6	1	1	8	11/01	Yamanashi et al				
	2 0 0 1	0	0	5	4	1	3	6	12/01	Ninomiya et al				
	2 0 0 1	0	0	5	6	5	2	7	12/01	Ninomiya et al				
	2 0 0 2	0	1	6	2	0	5	7	10/02	Talagala				
	2 0 0 3	0	0	4	1	2	0	1	2/03	Rauscher				
	2 0 0 3	0	1	7	2	1	5	0	9/03	Kennedy				
	2 0 0 4	0	1	1	7	5	3	4	6/04	Parry et al				
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	2 0 0 3	0	2	2	1	0	6	1	11/03	EI-Batal et al				
	2 0 0 3	0	0	4	1	2	7	8	2/03	Lin				
	2 0 0 4	0	2	6	7	5	1	6	12/04	Jibbe et al				
	2 0 0 5	0	0	2	7	9	0	0	2/05	Pettey				

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER								DATE	COUNTRY	CLASS	SUBCLASS	ABSTRACT
	9	9	5	0	7	5	4		10/99	WO				YES

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	2 0 0 3	0	2	3	1	4	2	0	12/03	Kano et al				
	2 0 0 4	0	0	8	8	4	8	2	5/04	Tanzer et al				
	2 0 0 4	0	1	6	9	9	9	6	9/04	Paul et al				
	2 0 0 1	0	0	1	9	5	0	9	9/01	Aho et al				
	2 0 0 3	0	0	4	6	4	6	0	3/03	Inoue et al				
	2 0 0 4	0	1	3	9	2	6	0	7/04	Steinmetz				
	2 0 0 4	0	1	4	8	3	2	9	7/04	Ogasawara et al				
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2 0 0 2	0 0 4 9 8 8 6	4/02	Furuya et al			
2 0 0 2	0 1 4 4 0 5 7	10/02	Li et al			
2 0 0 3	0 1 3 1 2 9 1	7/03	Morrison et al			
2 0 0 3	0 1 6 7 4 3 9	9/03	Talagala et al			
2 0 0 3	0 0 9 7 4 8 7	5/03	Rietze et al			
2 0 0 4	0 1 1 1 4 8 5	6/04	Mimatsu et al			
2 0 0 4	0 2 6 8 0 3 7	12/04	Buchanan, Jr. et al			
2 0 0 4	0 2 6 8 0 6 9	12/04	Satoyama et al			
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		6	7	7	2	2	8	7	8/04	Uchiyama et al			
		6	6	8	4	2	8	2	1/04	Kocis			
2 0 0 3		0	1	8	2	5	0	2	9/03	Kleiman et al			
2 0 0 2		0	0	1	9	8	9	7	2/02	Cruyningen			
2 0 0 4		0	2	4	3	3	8	6	12/04	Stolowitz et al			

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2 0 0 3	0 2 1 2 8 5 9	11/03	Ellis			
2 0 0 4	0 1 4 8 4 6 0	7/04	Steinmetz			
2 0 0 4	0 1 4 8 4 6 1	7/04	Steinmetz			
2 0 0 4	0 2 3 6 9 0 8	11/04	Suzuki et al			
2 0 0 3	0 1 1 0 3 3 0	6/03	Fujie et al			
	5 8 4 5 3 1 9	12/98	Yorimitsu			
2 0 0 3	0 1 4 9 8 4 0	8/03	Bolt, et al			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Serial Attached SCSI and Serial ATA Compatibility, Intel, 2002, pp. 1-8.

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		6	2	4	0	4	8	6	5/01	Ofek et al				

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		DOCUMENT NUMBER								DATE	COUNTRY	CLASS	SUBCLASS	ABSTRACT
		5	1	5	0	9	0	9	6/93	Japan				YES
	1	0	3	0	1	7	2	0	11/98	Japan				Eng.Trans

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if citation is considered, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(Form PTO-1449 [6-4])

**FORM PTO-1449 U.S. Department of
Commerce Patent and Trademark Office**

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use several sheets if necessary)

ATTY. DOCKET NO.

1309.43669X00

SERIAL NO.

10/802,913

APPLICANT
Hiroshi SUZUKI et al.

FILING DATE
March 18, 2004

GROUP
2836

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER							DATE	NAME	CLASS	SUBCLASS	FILING DA IF APPROP
		6	4	4	9	7	0	9					
		6	6	8	4	2	9	5	09/02	Gates			
		6	7	4	5	2	8	7	1/04	Fujimoto et al			
		2 0 0 3	0	1	1	0	3	3	06/03	Fujimoto et al			
		2 0 0 3	0	2	1	2	8	5	9	11/03	Fujie et al		
		2 0 0 3	0	2	2	1	0	6	11/03	Ellis et al			
		2 0 0 3	0	0	4	1	2	7	2/03	EI-Batal et al			
		2 0 0 4	0	0	7	8	7	0	04/04	Lin			
		2 0 0 4	0	0	1	0	6	6	1/04	Apperley et al			
		2 0 0 4	0	0	1	0	6	6	0	Konshak			
EXAMINER							DATE CONSIDERED						

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(Form PTO-1449 [6-4])

FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)									ATTY. DOCKET NO.	SERIAL NO.
									1309.43669X00	10/802,913
									APPLICANT Hiroshi SUZUKI et al.	
									FILING DATE March 18, 2004	GROUP 2836

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER								DATE	NAME	CLASS	SUBCLASS	FILING DAT IF APPROPRIATE
	2 0 0 4	0	1	1	1	5	6	0		Takase et al				
	2 0 0 4	0	2	6	7	5	1	6		Jibbe et al				
	2 0 0 5	0	0	2	7	9	0	0		Pettey				

FOREIGN PATENT DOCUMENTS

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	2 0 0 2	1	5	0	7	4	6		05/02	Japan				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	EMC 2-Gigabit Disk-Array Enclosure EMC Corporation (DAE2), FC and ATA Models, Hardware Reference P/N 014003048, Rev A02
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(Form PTO-1449 [6-4])

FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office	ATTY. DOCKET NO. 1309.43669X00	SERIAL NO. 10/802,913
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		
(Use several sheets if necessary)		
APPLICANT Hiroshi SUZUKI et al.		
FILING DATE March 18, 2004		
GROUP 2836		

U.S. PATENT DOCUMENTS

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FOREIGN PATENT DOCUMENTS											ABSTRACT		
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER _____ **DATE CONSIDERED** _____

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(Form PTO-1449 [6-4])

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APPLICANT
Hiroshi SUZUKI et al.FILING DATE
March 18, 2004GROUP
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U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER							DATE	NAME	CLASS	SUBCLASS	FILING DA IF APPROP
	2 0 0 5	0	2	1	6	6	2	4	9/05	Deng et al	710	074	
	2 0 0 2	0	1	6	2	0	4	8	10/02	Ackaret et al			
		6	7	6	3	4	0	9	7/04	Elliott			
		6	0	3	7	7	3	8	3/00	Morita et al	318	625	
		6	4	4	9	7	0	9	9/02	Gates			
		5	8	2	2	7	8	2	10/98	Humlincek et al			
		5	8	1	2	7	5	4	9/98	Lui et al			

FOREIGN PATENT DOCUMENTS

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EXAMINER

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									APPLICANT Hiroshi SUZUKI et al.		
									FILING DATE March 18, 2004	GROUP 2836	

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER								DATE	NAME	CLASS	SUBCLASS	FILING DA IF APPROP
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	2 0 0 3	0	1	8	9	8	1	1	10/03	Peeke et al				
	2 0 0 3	0	1	3	5	5	7	7	7/03	Weber et al				
	2 0 0 4	0	1	1	7	5	1	7	6/04	Beauchamp et al				

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	ABSTRACT
							YES

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	ESG Product Brief EMC, March 2003, CLARiiON with ATA, pp. 1-2.
EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation is considered, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(Form PTO-1449 [6-4])

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								1309.43669X00	10/802,913
								APPLICANT Hiroshi SUZUKI et al.	
								FILING DATE March 18, 2004	GROUP 2836

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER							DATE	NAME	CLASS	SUBCLASS	FILING DA IF APPROPRI ATE
2	0	0	1	4	9	5	6	8/01	Nagata et al				
0													
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1													

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER							DATE	COUNTRY	CLASS	SUBCLASS	ABSTRACT
													YES

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	EMC CLARiiON Backup Storage Solutions Back-up-to-Disk Guide with LEGATO Networker DiskBackup Option (DBO), Engineering White Paper, 4/8/2003, pp. 1-28.
	EMC CLARiiON Backup Storage Solutions Backup-to-disk Guide with Computer Associates, BrightStor ARCserve Backup, Engineering White Paper, 4/16/2003, pp. 1-24.
	EMC CLARiiON Backup Storage Solutions Backup-to-Disk Guide with CommVault Galaxy, Engineering White Paper, 3/3/2003, pp. 1-26.
	EMC CLARiiON Backup Storage Solutions Backup-to-Disk Guide: An Overview, Engineering White Paper, 3/3/2003, pp. 1-10.
	EMC CLARiiON Backup Storage Solutions Backup-to-Disk Guide with Computer Associates BrightStor Enterprise Backup, Engineering White Paper, 4/16/2003, pp. 1-23.

EXAMINER	DATE CONSIDERED
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(Form PTO-1449 [6-4])

FORM PTO-1449 (REV. 7-80)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 1309.43669X00	SERIAL NO. 10/802,913
LIST OF DOCUMENTS CITED BY APPLICANT <i>(Use several sheets if necessary)</i>				APPLICANT H. Suzuki, et al	
				FILING DATE March 18, 2004	GROUP 2836

U.S. PATENT DOCUMENTS

* EXAMINER INITIAL		DOCUMENT	DATE	NAME	CLASS	SUBCLASS	FILING DATE (If Appropriate)
	AA	6,763,409	07/13/04	Elliott, Stephen J.			
	AB	5,812,754	09/22/98	Liu et al			
	AC	5,432,046	06/06/95	Nunnelley et al			
	AD	5,848,282	12/08/98	Kang et al			
	AE	2002/062454	05/23/02	Fung, Henry T.			
	AF	5,805,788	09/08/98	Johnson			
	AG	2004/0221101	11/04/04	Voorhees et al			
	AH						
	AI						
	AJ						
	AK						

FOREIGN PATENT DOCUMENTS

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	AN						<input type="checkbox"/> <input type="checkbox"/>
	AO						<input type="checkbox"/> <input type="checkbox"/>
	AP						<input type="checkbox"/> <input type="checkbox"/>

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

AR	Judd, Ian, "Device Services Interface", Online, June 19, 1996, pp. 1-8.
AS	"Veritas Volume Manager Storage Administrator 3.2, Administrator's Guide", Veritas Software Corporation, Online, July, 2001, pp. 1-184.
AT	Synetic Inc., SyneRAID -800SA, SCSI/Fibre-toSATA RAID Subsystem product information, available at: http://www.synetic.net/Synetic-Products/SyneRAID-Units/SyneRAID-800SATA/SyneRAID-800SA.html
	"SATA Disk System and Expansion of Unit offer 3.5 TB storage", Product News Network, Nov. 1, 2004.

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				FILING DATE March 18, 2004	GROUP 2836

U.S. PATENT DOCUMENTS

* EXAMINER INITIAL	DOCUMENT	DATE	NAME	CLASS	SUBCLASS	FILING DATE (If Appropriate)
AA	2002/ 0069317	06/06/02	Chow et al			
AB	2002/ 0069334	6/06/02	Hsia et al			
AC	2003/ 0031187	02/13/03	Heffernan et al			
AD	2003/ 00221061	11/27/03	El-Batal et al			
AE	2004/ 0010660	01/15/04	Konshak et al			
AF	2004/ 0034731	02/19/04	Sivertsen			
AG	2004/ 0193791	09/30/04	Felton et al			
AH						
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AJ						
AK						

FOREIGN PATENT DOCUMENTS

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

AR		SGI InfiniteStorage TP9300S Storage Array, Data Sheet, available at:
		http://www.sgi.com/pdfs/3643.pdf
AS		Adaptec FS4500 Fibre to SATA RAID, Data Sheet, available at:
		http://www.sunstarco.com/PDF%20Files/Adaptec%20FS4500%20SATA.pdf
AT		

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LIST OF DOCUMENTS CITED BY APPLICANT <i>(Use several sheets if necessary)</i>				APPLICANT H. SUZUKI et al	
				FILING DATE March 18, 2004	GROUP 2836

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT	DATE	NAME	CLASS	SUBCLASS	FILING DATE (If Appropriate)
	AA	2005/0138154	06/23/05	Seto			
	AB	2005/0097132	05/05/05	Cochran et al			
	AC	2004/0148460	07/29/04	Steinmetz et al			
	AD	6,834,326	12/21/04	Wang et al			
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	AP						<input type="checkbox"/>	<input type="checkbox"/>

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

AR		Infortrend EonStor A16F-R1211/S1211 FC-to-SATA RAID Subsystem product information, available at: http://www.infortrend.com/2_product/a16f-r(s)1211.asp					
AS							
AT							
EXAMINER				DATE CONSIDERED			

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